

Certificate of Transmission 1 hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on January 7, 2002 by Patrick J. Wells

APPENDIX

(Amended Claims)

- Threaded implant [(3)] for obtaining reliable anchoring in bone 1. (Amended) substance [(1)], [preferably in the jaw-bone, in the human body,] the bone substance being provided with a hole [(2)] in whose side wall [(2b) it is possible to establish] an internal threading [(la)] may be established which can cooperate with an external threading [(3d, 3d')] on the implant for reliable anchoring and healing-in of the implant in the bone substance, wherein [characterized in that] the implant threading is arranged [, particularly in the case of soft bone substance,] to force the bone substance out in essentially radial directions [(R)] as a function of the extent to which the implant is screwed into the hole, that the implant threading has a slight conicity which extends along most or part of the length [(L)] of the implant and which cooperates with a circular cylindrical hole [(2)] in the bone [(1)] substance to effect greater forcing out of the bone substance at the outer parts [(2c)] of the hole than at the inner parts [(2d)] of the hole, the degree of forcing out being adapted in relation to the softness of the bone substance in order to achieve the reliable anchoring, and that said conical threading comprises two or more thread spirals [(thread entries)] which [, despite shortening the time for screwing the implant into the hole,] provide a tight threading which permits effective integration with the bone substance during the healing-in process and counteracts deformation or breaking-up of fine bone trabeculae which surround the hole in the bone.
- 2. (Amended) Implant according to claim 1, wherein [characterized in that] the implant threading is arranged to ensure that the pressure [(P, P')] between the bone substance and the implant has essentially a constant or slightly increasing value during the greater part of the operation of screwing the implant into the hole.

Certificate of Transmission I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on January 7, 2002 by Patrick J. Wells

- 3. (Twice Amended) Implant according to claim 1, wherein [characterized in that] the front portion [(tip) (3a)] of the implant is designed with a conical thread [(3e)] which has a conicity essentially exceeding the conicity of the slightly conical thread [(3d)].
- 4. (Amended) Implant according to claim 3, wherein [characterized in that] the conicity of the slightly conical thread is chosen between 0.1 0.4 mm or has an angle of inclination [(**)] of about 0.5 [0, 5] 2°, and/or the thread conicity of the thread at the said front portion [/tip (3a)] of the implant is of the order of 0.4 0.8 mm or with an angle of inclination [(**)] of about 10 15°, and the front portion[/tip] of the implant has a length or height [(h)] of about 10 30% of the length [(L)] of the threaded part of the implant.
- 5. (Amended) Implant according to claim 1, wherein [characterized in that] the implant threading along at least part of the longitudinal direction of the implant is given a noncircular or eccentric configuration [(8a-8i)] for the purpose of obtaining improved rotational stability of the implant in the recently inserted state or the incorporated state of the implant in the [soft/weak] bone substance.
- 6. (Amended) Implant according to claim 5, wherein [characterized in that] the implant is arranged with a minimum diameter [(D')] which corresponds to or is slightly greater [, for example 1 5% greater,] than the diameter [(d)] of the hole in the bone substance.
- 7. (Twice Amended) Implant according to claim 1, wherein [characterized in that] the front portion [tip or the free end] of the implant has a circular or concentric thread [(3e)] which merges gradually into a non-circular or eccentric thread on the remaining part or parts of the implant.

09/509,869

2022936229 P.11/11

Certificate of Transmission I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on January 7, 2002 by Patrick J. Wells

- 8. (Twice Amended) Implant according to claim 1, wherein [characterized in that] the peripheris of the different non-circular or eccentric thread cross-sections have bevelled corners [(12) in order to avoid sharp corners].
- 9. (Twice Amended) Implant according to claim 1, wherein [characterized in that] the non-circularity is arranged such that areas of maximum diameter are displaced in the peripheral direction from one thread turn [(10)] to the next thread turn [(11)].
- 10. (Amended) Implant according to claim 1, wherein [characterized in that] the number of thread spirals [/thread entries] is two, three or four.
- 11. (Amended) Implant according to claim 10, wherein [characterized in that] the number of thread spirals [/thread entries] is adapted to the number of cutting edges [(5a, 5b, 5c, 5d)] so that symmetrical cutting forces are obtained.
- 12. (Twice Amended) Implant according to claim 10, wherein [characterized in that] two thread spirals are arranged on the implant together with two or four cutting edges, or in that three thread spirals are arranged together with three cutting edges[, etc].

9

09/509,869